

PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference
FS05-430PCT

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/JP2005/003851

International filing date (day/month/year)
07.03.2005

Priority date (day/month/year)
09.03.2004

International Patent Classification (IPC) or both national classification and IPC

Applicant
JAPAN SCIENCE AND TECHNOLOGY AGENCY

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
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International application No.

PCT/JP2005/003851

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2005/003851

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-4	YES
	Claims	5	NO
Inventive step (IS)	Claims	1-4	YES
	Claims	5	NO
Industrial applicability (IA)	Claims	1-5	YES
	Claims		NO
2. Citations and explanations:			
<p>[Document 1] "A preparative synthesis of 1-amino-3-hydroxypropylphosphonic acid (phosphoric analog of homoserine), (CHOLLET-GRAVEY, Anne Marie et al.), Synthetic Communications, 1991, 21(18-19), 1847-1858</p> <p>[Document 2] "The synthesis and rotational isomerism of [1-amino-2-(4-imidazolyl) ethyl] phosphonic acid [phosphonohistidine, His(P)] and [1-amino-2-(2-imidazolyl)ethyl] phosphonic acid [phosphonoisohistidine, isohis(P)]", (MERRETT, John H. et al.), Journal of the Chemical Society, Perkin Transactions 1: Organic and Bio-Organic Chemistry, 1972-1999, (1988), (1), 61-67</p> <p>[Document 3] "Synthesis of 1-aminophosphonic acid derivatives via (acylimino) phosphonic esters", (SCHRADER, Thomas et al.), Synthesis, 1986, (5), 372-375</p> <p>[Document 4] "Asymmetric synthesis of (α-aminophosphonic acids by cycloaddition of N-glycosyl-C-dialkoxyposphonoylnitrones", (VASELLA, Andrea et al.), Helvetica Chimica Acta, 1982, 65(7), 1953-1964</p> <p>Claim 5 does not appear to be novel or to involve an inventive step, since it is described in document 1 cited in the ISR.</p> <p>Claim 5 does not appear to be novel or to involve an inventive step, since it is described in document 2 cited in the ISR.</p> <p>Claim 5 does not appear to be novel or to involve an inventive step, since it is described in document 3 cited in the ISR.</p> <p>Claim 5 does not appear to be novel or to involve an inventive step, since it is described in document 4 cited in the ISR.</p> <p>The subject matters of claims 1-4 are neither described in any of the documents cited in the ISR and other documents considered to relate to the present invention, nor obvious to a person skilled in the art.</p>			